



# Sickle Cell Disease

[Source: PIB](#)

## Why in News?

More than 1 crore people have been screened for [Sickle Cell Disease \(SCD\)](#) under the [National Sickle Cell Anaemia Elimination Mission](#).

- The National Sickle Cell Anemia Elimination Mission launched in **2023**, aims to eliminate sickle cell anemia from India by 2047.

## What is Sickle Cell Disease (SCD)?

- **About:**
  - SCD is a group of inherited [red blood cell](#) (RBC) disorders. RBCs **contain hemoglobin, a protein** that carries oxygen and healthy RBCs are round. In SCD, the hemoglobin is abnormal, which causes the RBCs to become hard and sticky and look like **a C-shaped farm tool called a “sickle**.
- **Symptoms:**
  - Symptoms of sickle cell disease can vary, but some common symptoms include:
    - [Chronic Anaemia](#): leading to fatigue, weakness, and paleness.
    - Painful episodes (also known as sickle cell crisis): these can cause sudden and intense pain in the bones, chest, back, arms, and legs.
    - Delayed growth and puberty
- **Treatment:**
  - **Blood Transfusions:** These can help relieve anemia and reduce the risk of pain crises.
  - **Hydroxyurea:** This is a medication that can help reduce the frequency of painful episodes and prevent some of the long-term complications of the disease.
  - It can also be treated by bone marrow or [stem cell](#) transplantation.
- **Government Initiatives to Tackle SCD:**
  - The government released technical operational guidelines for the prevention and control of sickle cell anaemia in 2016.
  - The [State Haemoglobinopathy Mission](#) **has been established in Madhya Pradesh** to address the challenges in screening and management of the disease.
  - [Anaemin Mukh Bharat Strategy](#).

## UPSC Civil Services Examination Previous Year Question (PYQ)

### Prelims

**Q. Consider the following statements in the context interventions being undertaken under Anaemin Mukh Bharat Strategy : (2023)**

1. It provides prophylactic calcium supplementation for pre-school children, adolescents and pregnant women.
2. It runs a campaign for delayed cord clamping at the time of child-birth.

3. It provides for periodic deworming to children and adolescents.
4. It addresses non-nutritional causes of anaemia in endemic pockets with special focus on malaria, hemoglobinopathies and fluorosis.

**How many of the statements given above are correct?**

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Ans: (c)**

**Exp:**

**Interventions of Anaemia Mukd Bharat:**

- Not Prophylactic calcium supplementation but Prophylactic Iron and Folic Acid Supplementation is provided to children, adolescents and women of reproductive age and pregnant women irrespective of anemia. Hence, statement 1 is not correct.
- Appropriate Infant and Young Child Feeding (IYCF) with emphasis on adequate and age-appropriate complementary foods for children 6 months and above.
- Increase intake of iron-rich, protein-rich and vitamin C-rich foods through dietary diversification/quantity/frequency and food fortification
- Promoting practice of delayed cord clamping (by at least 3 minutes or until cord pulsations cease) in all health facility deliveries followed by early initiation of breastfeeding within 1 hour of birth. Hence, statement 2 is correct.
- Bi-annual mass deworming for children in the age groups between 1-19 years is carried out every year under National Deworming Day (NDD) programme. Hence, statement 3 is correct.
  - The Anemia Mukd Bharat, also integrates deworming of women of reproductive age and for pregnant women as part of the NDD strategy.
- Addressing non-nutritional causes of anemia in endemic pockets, with special focus on malaria, haemoglobinopathies and fluorosis.
- **Hence, statement 4 is correct.**